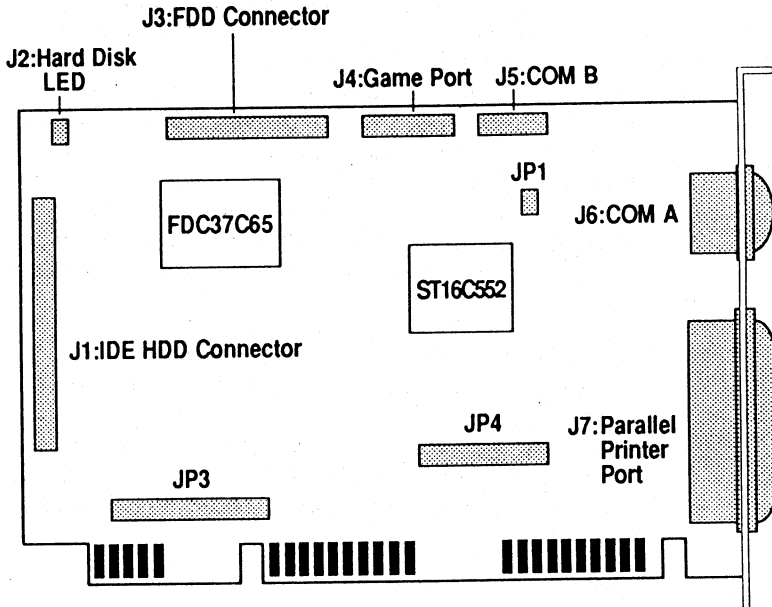


# MIO-550 I/O Board User's Manual



**The MIO-550 Board**

*DFI is a registered trademark, and MIO-550 is a trademark of Diamond Flower Inc. All other product names mentioned are trademarks or registered trademarks of their respective companies.*

## ❖ **FCC Statement on Class B**

*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. However, there is no guarantee that harmful interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio TV technician for help.*

### **Notice**

- (1) *The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*
- (2) *Shielded interface must be used in order to comply with the emission limits.*

## ❖ **Features and Specifications**

- **Serial Ports**
  - \* Two RS-232C 9-pin serial ports
  - \* Supports COM1, COM2, COM3 and COM4 addressed at 3F8-3FF, 2F8-2FF, 3E8-3EF and 2E8-2EF
  - \* Interrupt request lines from IRQ2-IRQ5, jumper selectable
  - \* Supports 16 byte FIFO buffers for receiver and transmitter registers in the ST16550 serial UART
  - \* Includes a 9-pin or 25-pin connector with cable for the secondary serial port
- **Parallel Printer Port**
  - \* One parallel printer port (25-pin female connector)
  - \* Supports LPT1 and LPT2 addressed at 378-37A and 278-27A
  - \* Supports bi-directional parallel port
  - \* Interrupt request lines IRQ5 and IRQ7, jumper selectable
- **Floppy Disk Controller**
  - \* One floppy disk controller
  - \* Supports two standard type floppy disk drives
  - \* Supports 360KB/1.2MB 5.25-inch and 720KB/1.44MB 3.5-inch floppy disk drives
  - \* Includes a 34-pin cable
- **IDE Hard Disk Interface**
  - \* One IDE hard disk interface
  - \* Supports two IDE hard disk drives
  - \* Includes a 40-pin cable
- **Game Port**
  - \* One game port
  - \* Includes a 15-pin game port cable
- All ports and connectors are equipped with enable/disable function.
- One card-edge bracket to mount the 9-pin/25-pin secondary serial port and the 15-pin game port
- Two-layer P.C.B.
- One year limited warranty

## ❖ Jumper Settings

### Jumper JP1

Bi-directional Printer Port



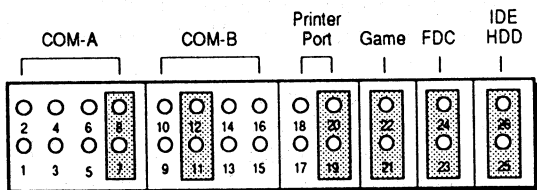
On: PC/AT Compatible  
(Default)



Off: Bi-directional

### Jumper Block JP3

Serial and Parallel Ports, Game Port, Floppy Disk Controller and IDE HDD



#### COM-A:

Pins 1-2 On: COM4 (2E8)

Pins 3-4 On: COM2 (2F8)

Pins 5-6 On: COM3 (3E8)

Pins 7-8 On: COM1 (3F8)\*

#### COM-B:

Pins 9-10 On: COM4 (2E8)

Pins 11-12 On: COM2 (2F8)\*

Pins 13-14 On: COM3 (3E8)

Pins 15-16 On: COM1 (3F8)

### Printer Port

Pins 17-18 On: LPT2 (278)

Pins 19-20 On: LPT1 (378)\*

### Game

Pins 21-22 On: Enabled\*

Pins 21-22 Off: Disabled

### FDC

Pins 23-24 On: Enabled\*

Pins 23-24 Off: Disabled

### IDE HDD

Pins 25-26 On: Enabled\*

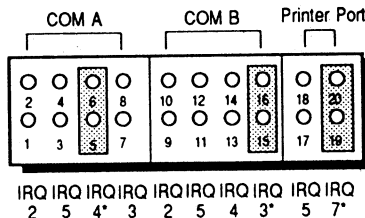
Pins 25-26 Off: Disabled

### Note:

*To disable COM-A, COM-B or the printer port, do not cover the corresponding rows with a jumper.*

### Jumper Block JP4

IRQ Line Settings



\* Default setting

### Note:

*Only cover one row of pins for each port. Covering more than one row will cause the corresponding port to fail.*

## ❖ Connector Pin Assignments

### Connector J1

IDE Hard Disk Interface

Pin	Assignment	Pin	Assignment
1	-Reset	21	Reserved
2	Gnd	22	Gnd
3	D7	23	-IOW
4	D8	24	Gnd
5	D6	25	-IOR
6	D9	26	Gnd
7	D5	27	IOCHRDY
8	D10	28	ALE
9	D4	29	Reserved
10	D11	30	Gnd
11	D3	31	IRQ14
12	D12	32	-IOCS16
13	D2	33	A1
14	D13	34	Reserved
15	D1	35	A0
16	D14	36	A2
17	D0	37	-CS0 (1F0-1F7)
18	D15	38	-CS1 (3F6-3F7)
19	Gnd	39	-Active
20	Key	40	Gnd

### Connector J2

Hard Disk LED Connector

Pin	Assignment
1	LED (+)
2	LED (-)

## Connector J3

### Floppy Disk Controller

Pin	Assignment
1	Gnd
2	RPM
3	Gnd
4	Reserved
5	Gnd
6	Reserved
7	Gnd
8	Index
9	Gnd
10	Motor Enable A
11	Gnd
12	Drive Sel B
13	Gnd
14	Drive Sel A
15	Gnd
16	Motor Enable B
17	Gnd

Pin	Assignment
18	Dir
19	Gnd
20	Step
21	Gnd
22	Write Data
23	Gnd
24	Write Gate
25	Gnd
26	Track 0
27	Gnd
28	Write Protect
29	Gnd
30	Read Data
31	Gnd
32	Head Select
33	Gnd
34	Disk Change

## Connector J4

### Game Port Connector

Pin	Assignment
1	+5VDC
2	+5VDC
3	Button 4
4	Button 6
5	Position 0
6	Position 2
7	Gnd
8	Gnd

Pin	Assignment
9	Gnd
10	Position 3
11	Position 1
12	Button 7
13	Button 5
14	+5VDC
15	+5VDC

## Connectors J5 and J6

### Primary and Secondary Serial Ports

#### RS-232C Pin Assignment

CF	1	DCD (Data Carrier Detect)
BB	2	RX (Receive Data)
BA	3	TX (Transmit Data)
CD	4	DTR (Data Terminal Ready)
AB	5	GND (Signal Ground)
CC	6	DSR (Data Set Ready)
CA	7	RTS (Request to Send)
CB	8	CTS (Clear to Send)
CE	9	RI (Ring Indicator)
	10	Not Connected

## Connector J7

### Parallel Printer Port

#### Pin Assignment

1	-Strobe
2	PD0
3	PD1
4	PD2
5	PD3
6	PD4
7	PD5
8	PD6
9	PD7
10	-Ack
11	Busy
12	Paper Empty
13	Select

#### Pin Assignment

14	-Auto Fdxt
15	-Error
16	-Init
17	-Slctin
18	Gnd
19	Gnd
20	Gnd
21	Gnd
22	Gnd
23	Gnd
24	Gnd
25	Gnd